



Where in New England can a New Ski Resort be Built?

By: Chris Fiore

Introduction

- Several geographic factors must be addressed when considering where to build a new ski resort:
 - Area
 - Slope
 - Precipitation

Data

■ Sugarloaf (Maine)

- summit: 4,237 ft.
- 1,400 acres boundary to boundary
- 54 miles of trails
- 133 trails

■ Killington (Vermont)

- summit: 3,050 ft.
- 11 miles boundary to boundary
- 7 mountains
- 90 miles of trails
- 200 trails

Data (cont.)

■ Attitash (New Hampshire)

- summit: 2,350 ft.
- 2 mountains
- 22 miles of trails
- 70 trails

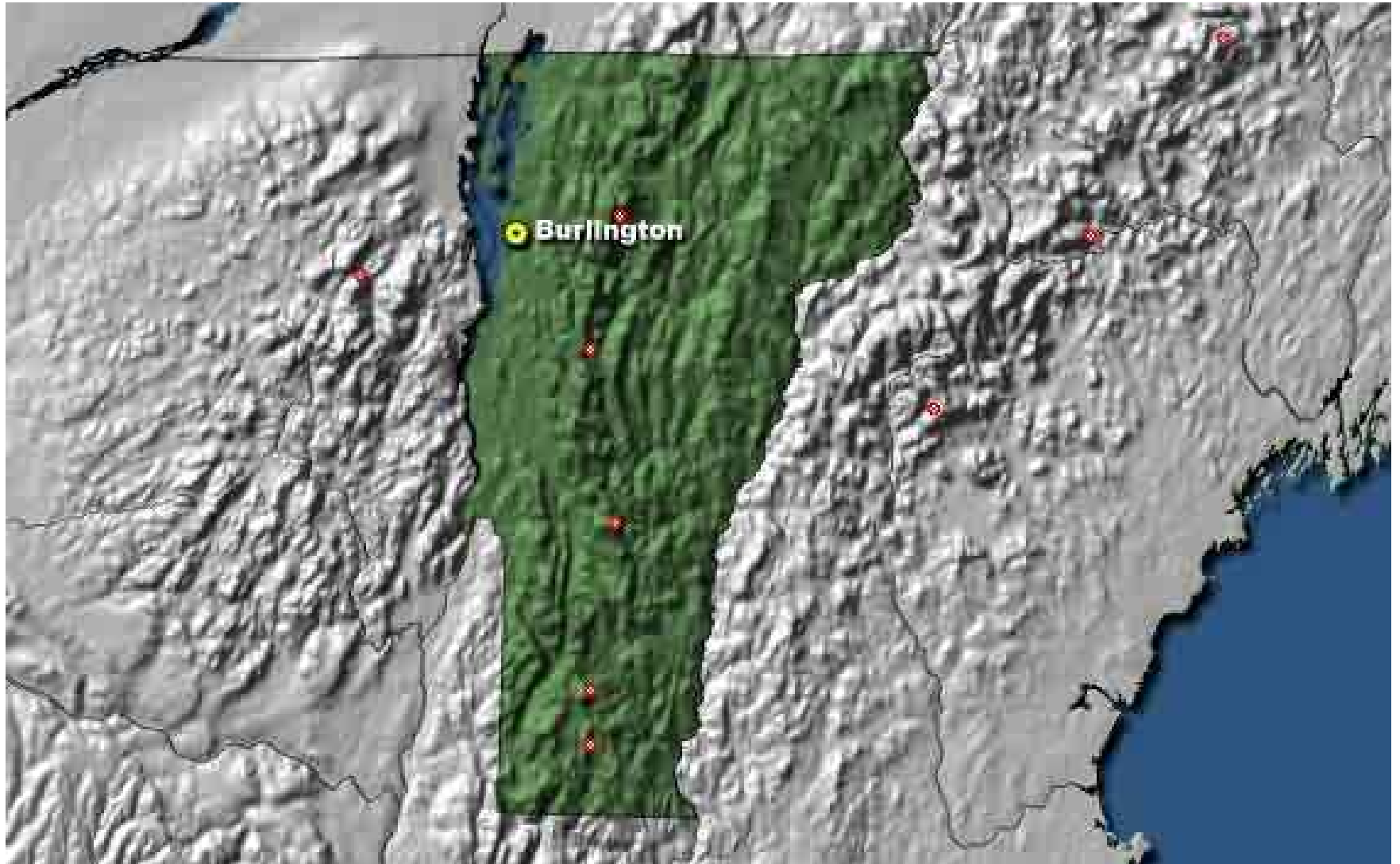
■ Wachusett (Massachusetts)

- summit: 2,006 ft.
- 450 acres boundary to boundary
- 100 acres of trails
- 20 trails

Vermont Counties



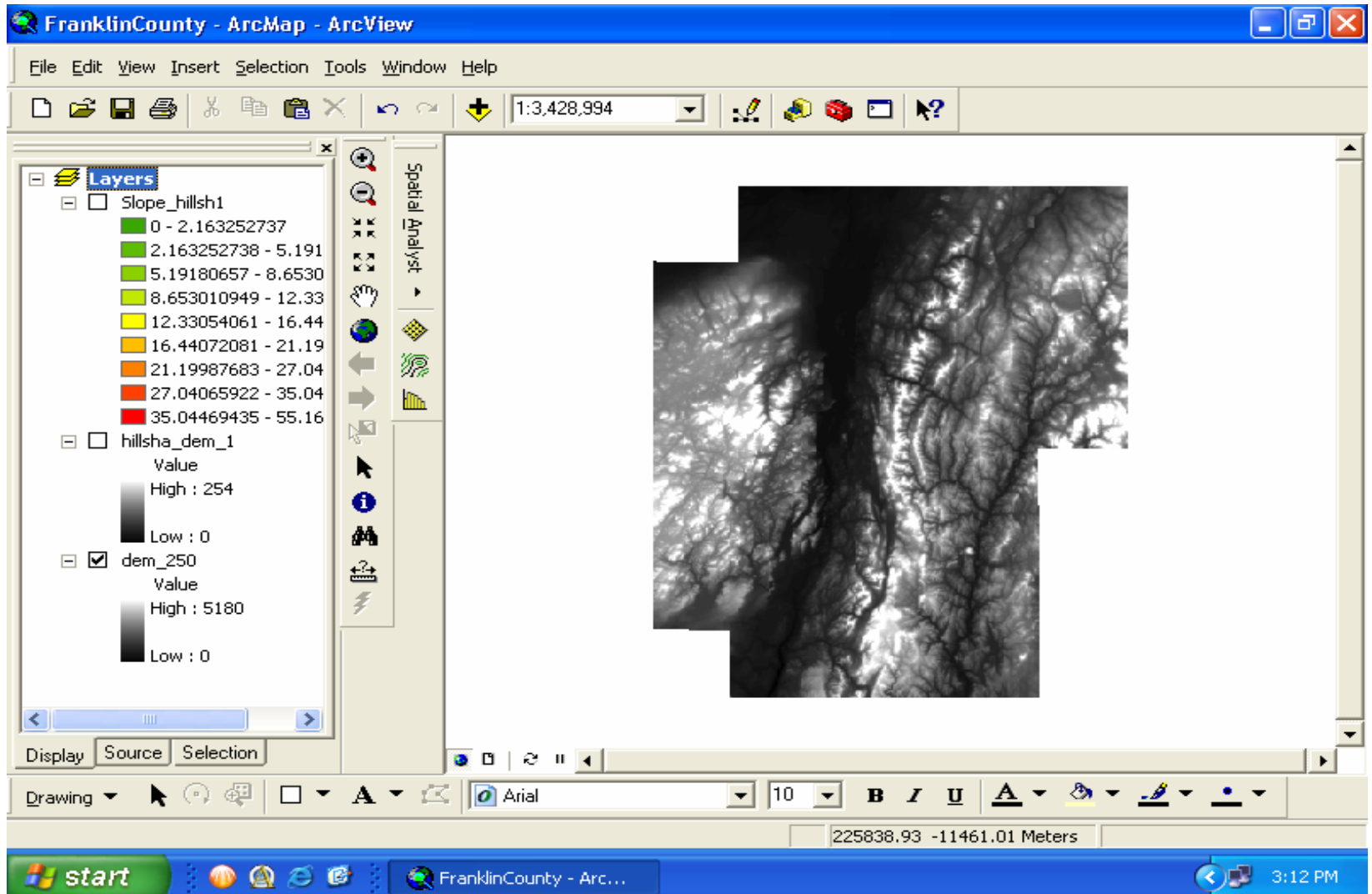
Franklin County, VT



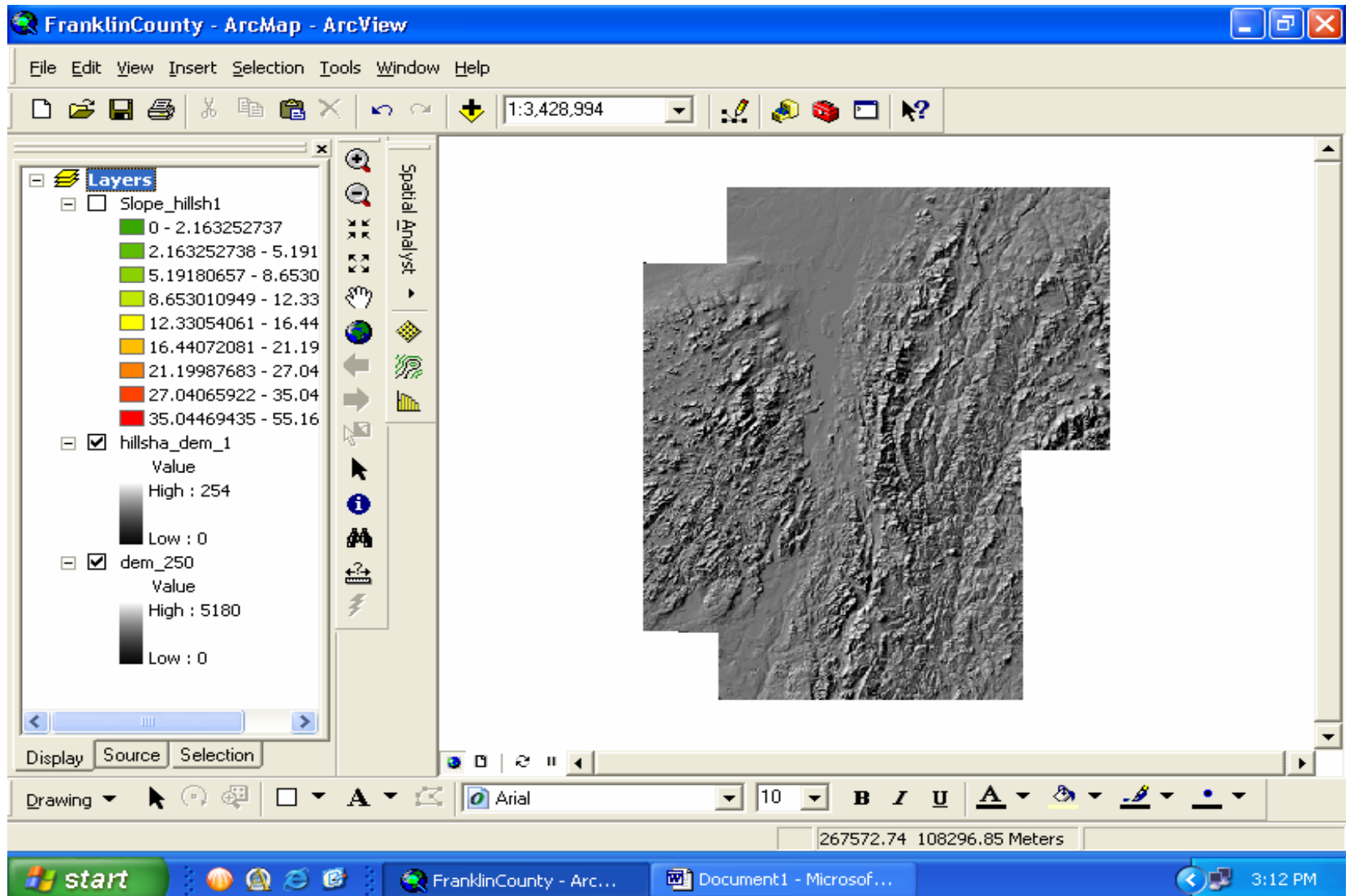
Methodology

- Acquire Digital Elevation Model (DEM)
- Create DEM layer using ArcMap
- Create Hillshade layer of DEM
- Create Hillshade layer with slopes

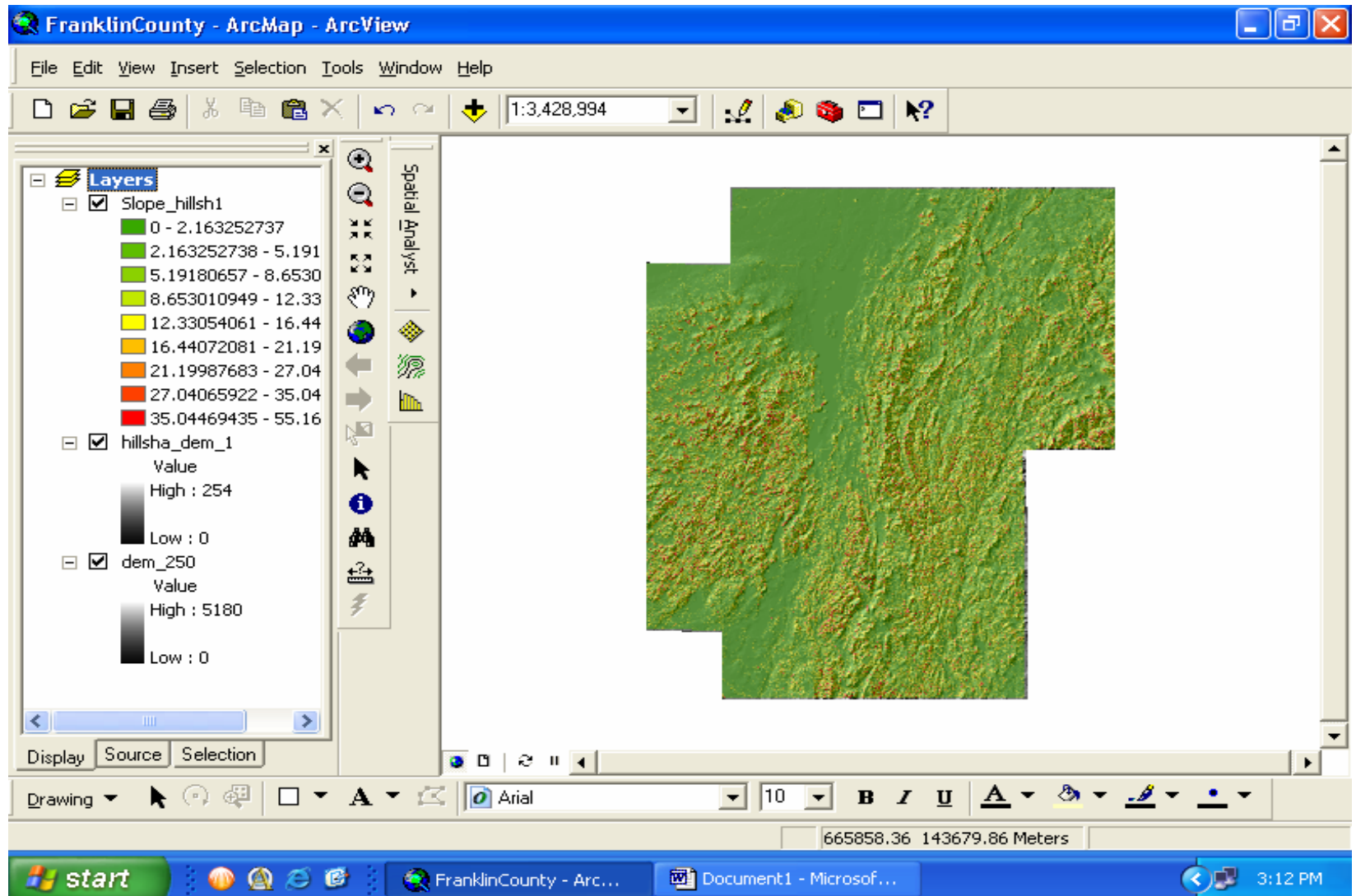
Original DEM



DEM with Hillshade



Hillshade with Slope

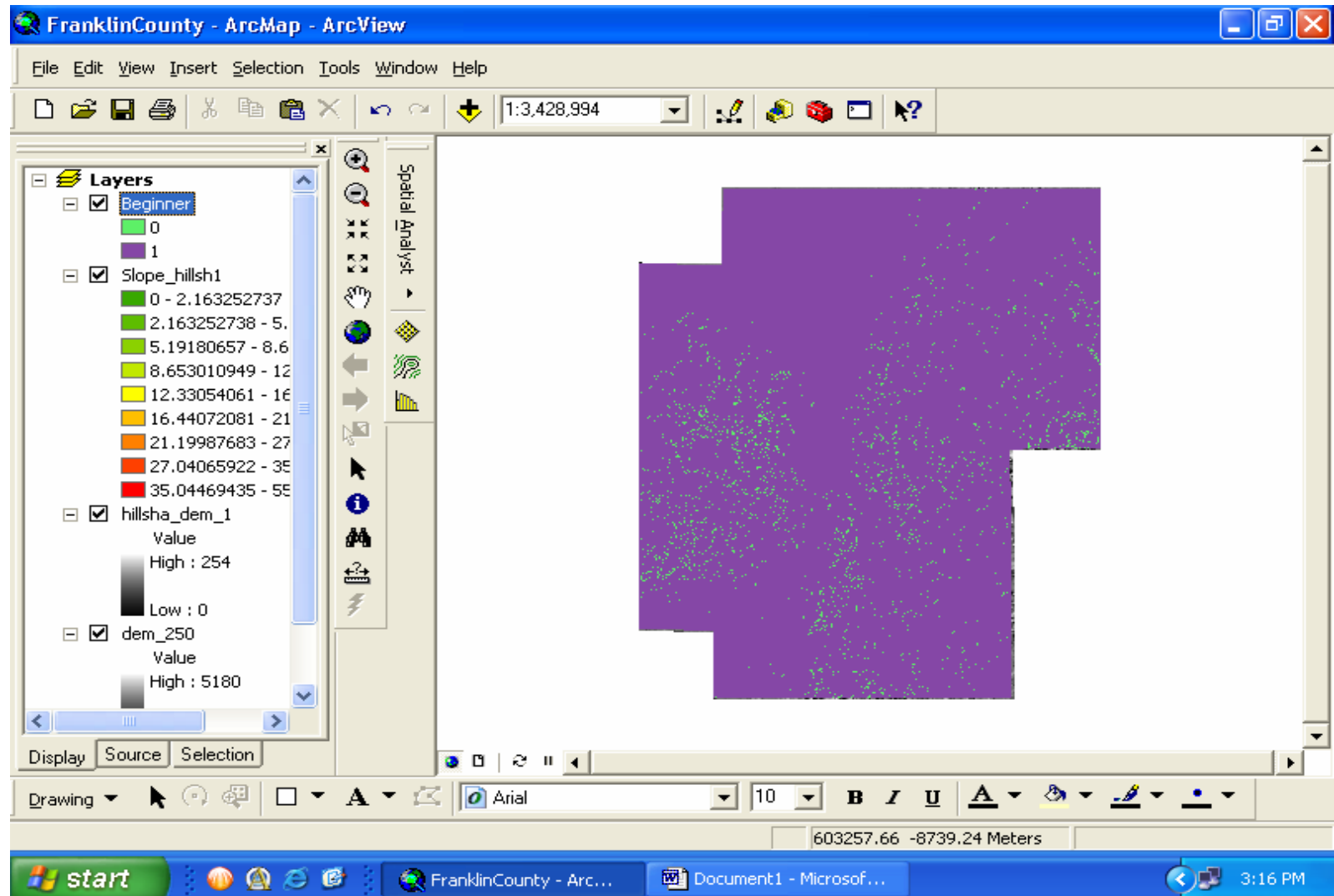


Slope Criteria

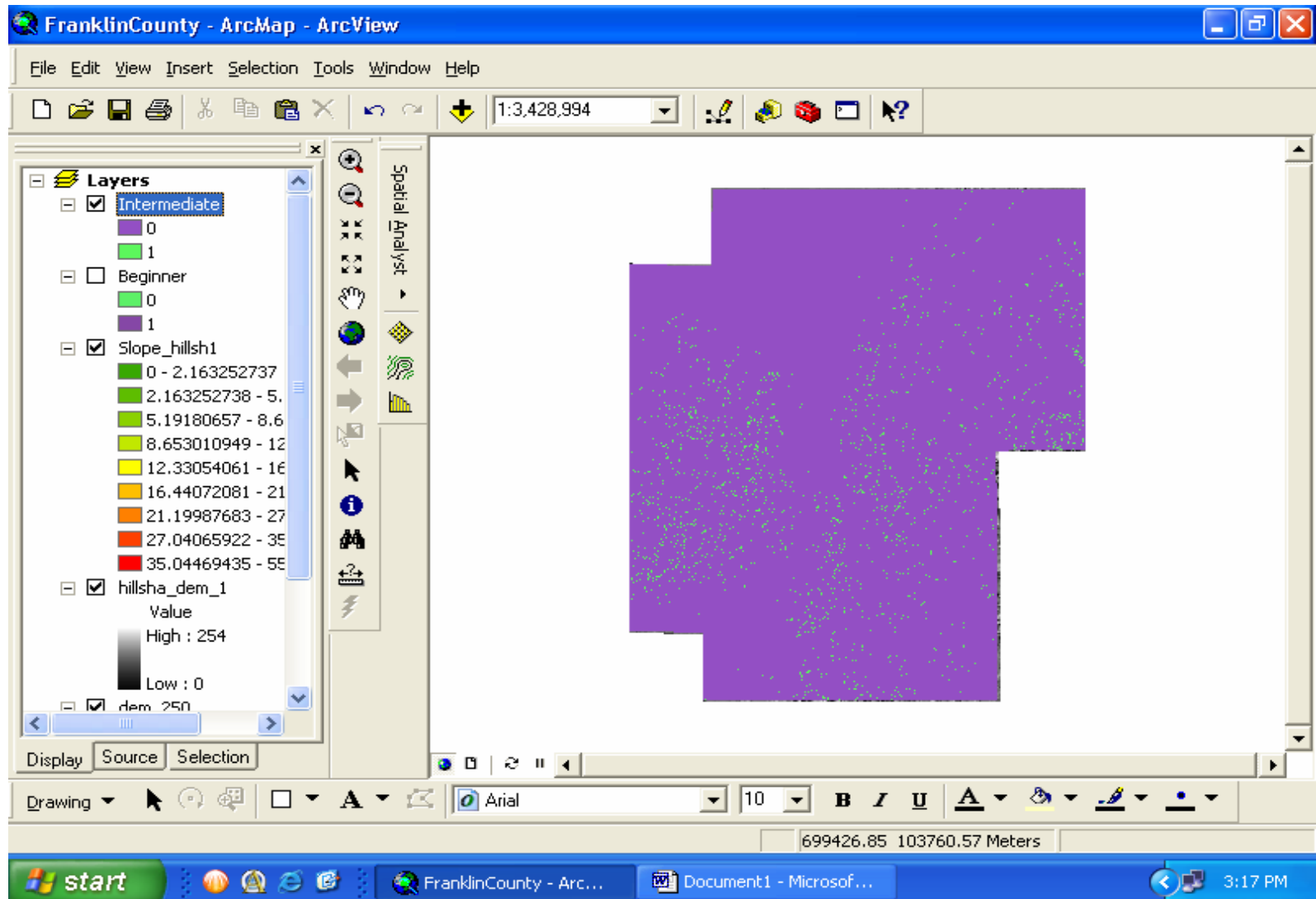
D Scale ski and snowboard route rating levels

- **D2** - Angle around 25 degrees with simple topography.
- **D3** - Perhaps slightly steeper than D2, or may include narrow sections, transitions, or other more challenging terrain features.
- **D4** - Similar to an easier "Expert" run at a resort. Slope angles usually around 30 degrees.
- **D5** - Similar to an "Expert" run at a resort, steeper (35 degree range) or more terrain obstacles than previous rating.

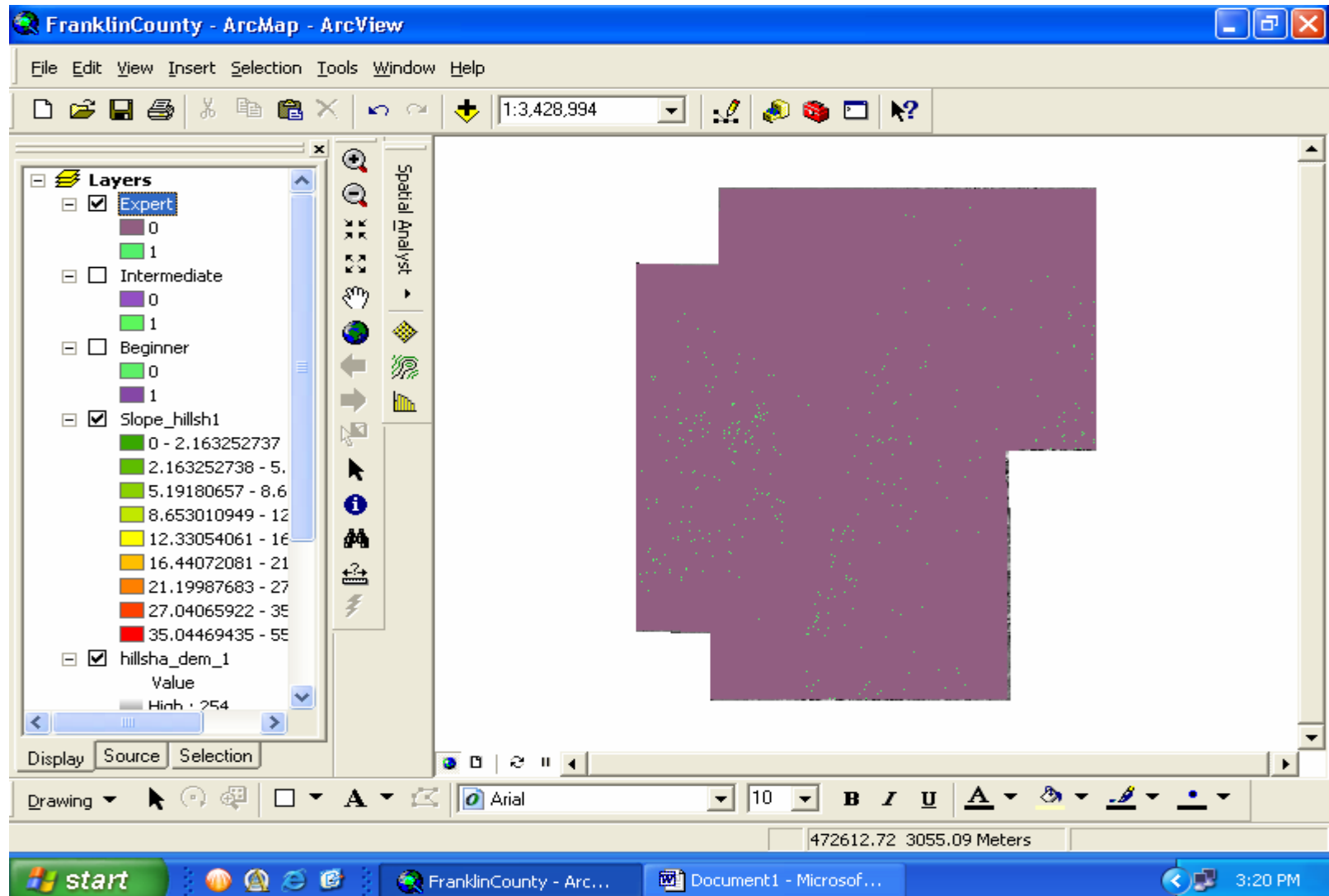
Slope - Beginner



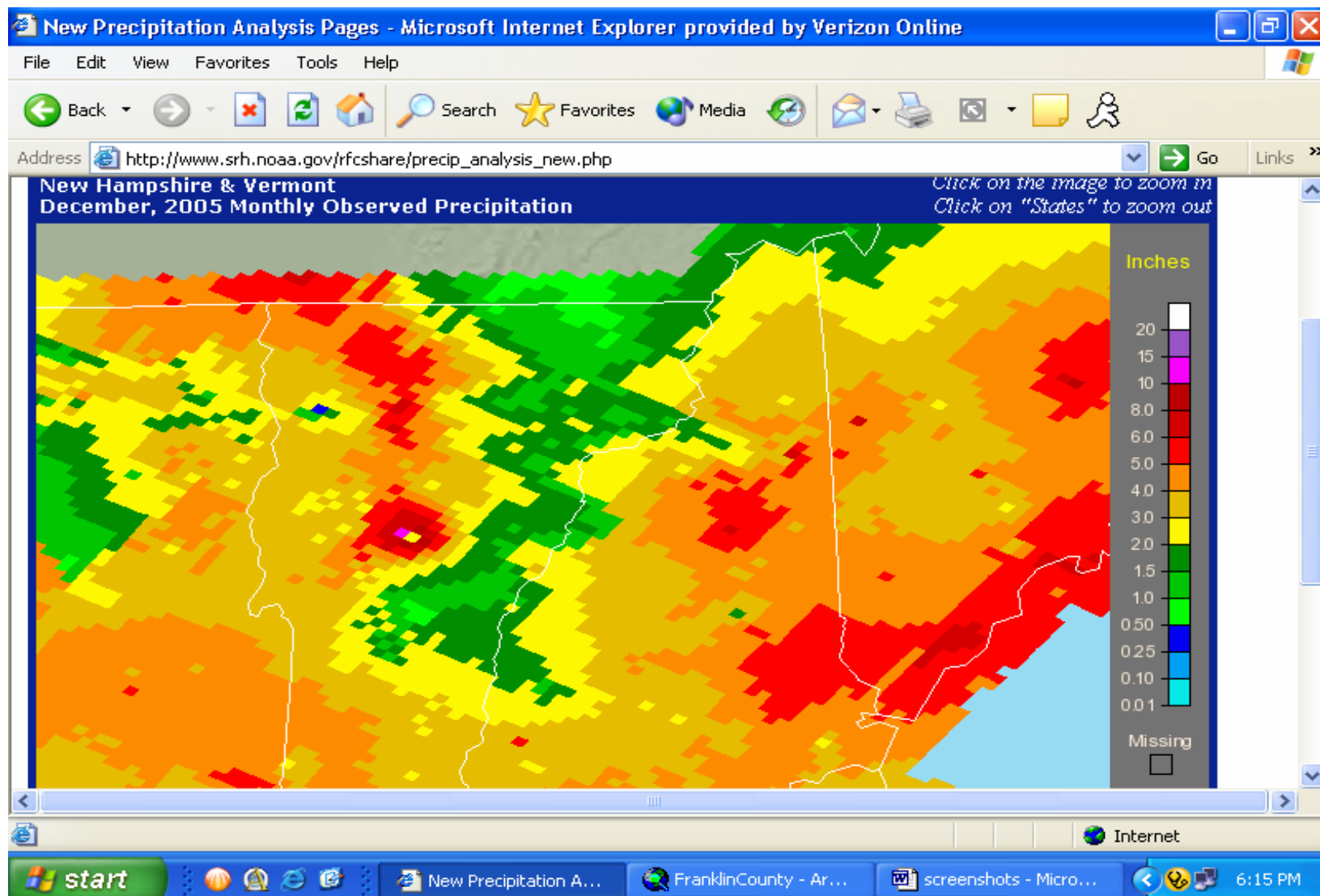
Slope - Intermediate



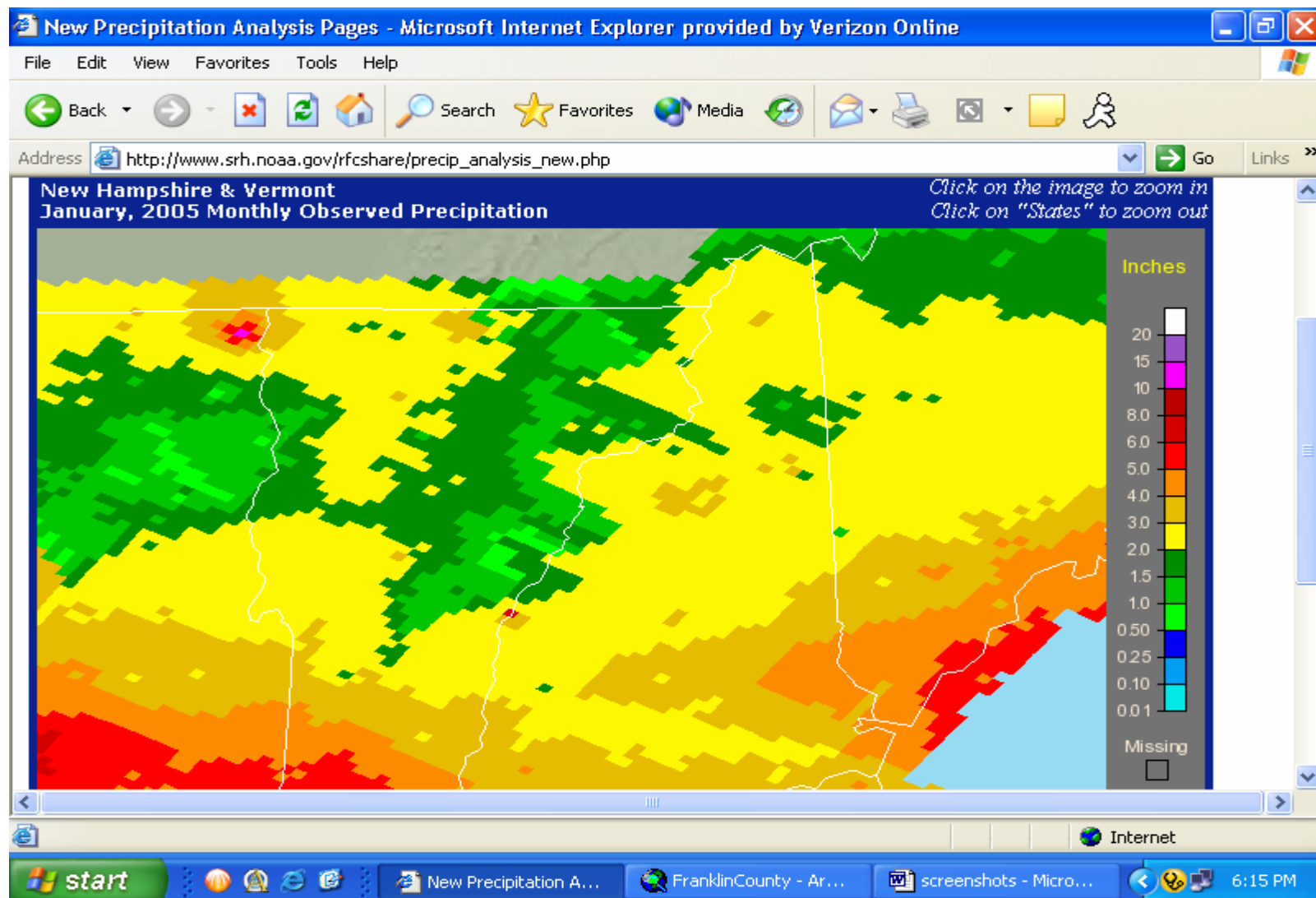
Slope - Expert



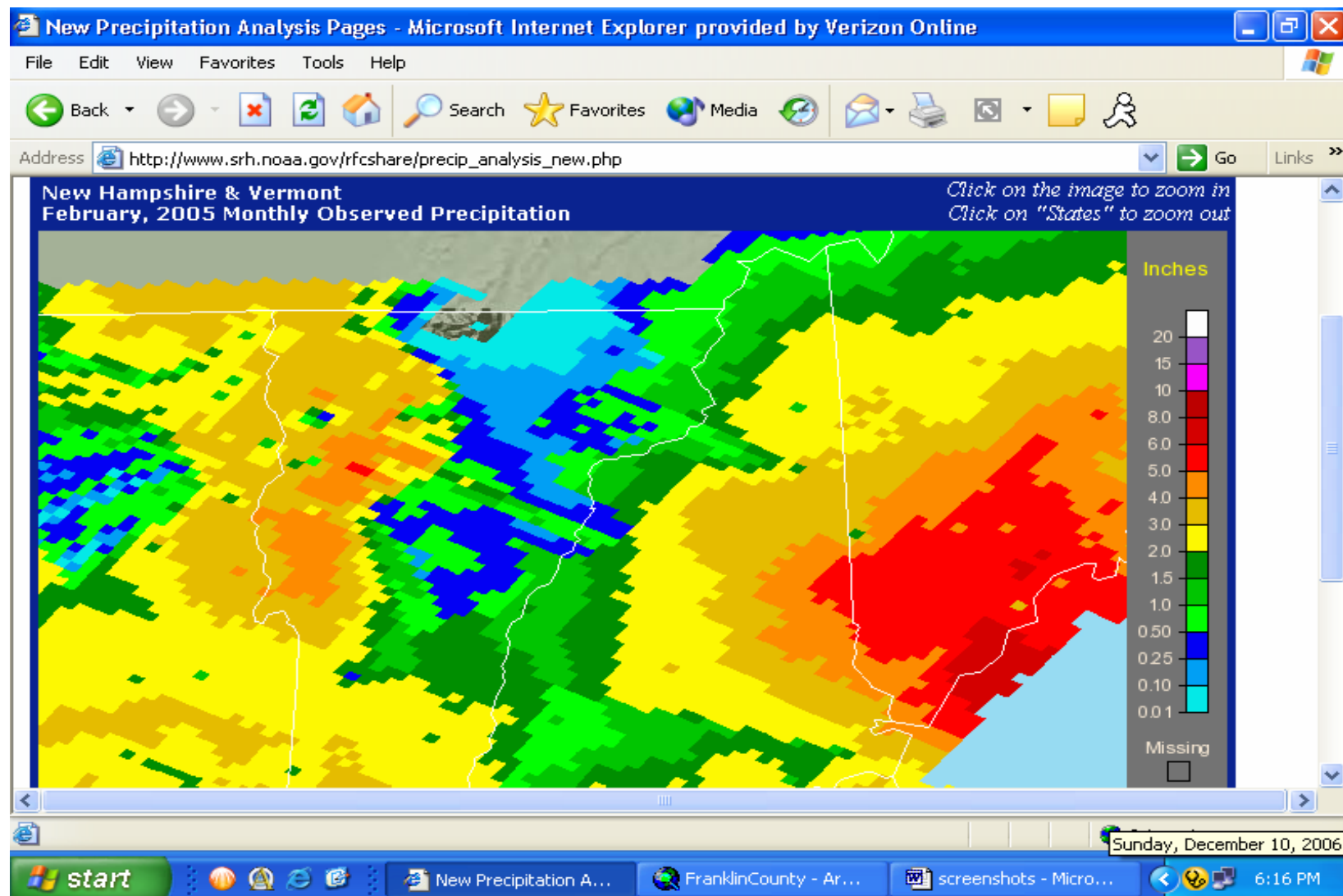
Precipitation

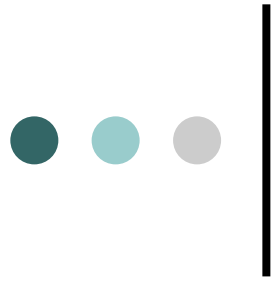


Precipitation



Precipitation





Thank You

References

- http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php
- <http://www.trails.com/stateactivity.asp?area=13469>
- http://quickfacts.census.gov/qfd/maps/vermont_map.html
- <http://www.vcgi.org>
- <http://www.wildsnow.com/articles/ratings/ski-board-d-rating-system.html>